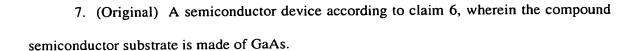
barrier diode made of an n+-type layer having a high doping concentration and a Schottky electrode provided on the n+-type layer, or a pn junction diode in which a pn junction with an n+ type layer having a high doping concentration is made.

3. (Currently Amended) A protection circuit of a <u>hetero-junction</u> field effect transistor according to claim 1, wherein the number of the forward direction first diodes of the <u>Schottky</u> diode array is determined so that a leak current of the protection circuit becomes not larger than a leak current value of a maximum rating of the gate electrode of the <u>hetero-junction</u> field effect transistor.

- 4. (Currently Amended) A protection circuit of a <u>hetero-junction</u> field effect transistor according to claim 1, wherein the field effect transistor is one selected from the group consisting of a junction field effect transistor, a Schottky barrier gate field effect transistor, and a hetero junction field effect transistor, and the <u>Schottky barrier</u> diode is constructed as a compound semiconductor element formed integrally with the transistor.
- 5. (Currently Amended) A semiconductor device comprising a protection circuit for protecting a gate electrode or a drain electrode of a <u>hetero-junction</u> field effect transistor against surge breakdown, wherein

the protection circuit includes a series connection of a plurality of <u>Schottky barrier</u> diodes, and a plurality of reverse <u>Schottky barrier</u> diodes.

6. (Original) A semiconductor device according to claim 5, wherein the semiconductor device is formed on a compound semiconductor substrate.



- 8. (Original) A semiconductor device according to claim 5, wherein the diode includes a first impurity introduction layer formed in a substrate, and a Schottky electrode formed on the first impurity introduction layer and being Schottky-connected to the first impurity introduction layer.
- 9. (Original) A semiconductor device according to claim 5, wherein the diode includes a first conductivity type first impurity introduction layer and a second conductivity type second impurity introduction layer provided opposite to the first impurity introduction layer.
 - 10. (Canceled) Please cancel Claim 10.
 - 11. (Canceled) Please cancel Claim 11.
 - 12. (Cancel) Please cancel Claim 12.
- 13. (Currently Amended) A semiconductor device comprising a protection circuit for protecting a gate electrode of a <u>hetero-junction</u> field effect transistor against surge breakdown, wherein

the protection circuit includes a first <u>Schottky barrier</u> diode having an anode connected to the gate electrode, a second <u>Schottky barrier</u> diode having a cathode connected to the <u>-a-</u> cathode of the first diode, a third <u>Schottky barrier</u> diode having an anode connected

to an the anode of the second diode, and a fourth Schottky barrier diode having a cathode connected to a—the cathode of the third diode.

14. (Currently Amended) A semiconductor device comprising a protection circuit for protecting a gate electrode of a <u>hetero-junction</u> field effect transistor against surge breakdown, wherein

the protection circuit includes a first <u>Schottky barrier</u> diode having a cathode connected to the gate electrode, a second <u>Schottky barrier</u> diode having an anode connected an the anode of the first diode, a third <u>Schottky barrier</u> diode having a cathode connected to a the cathode of the second diode, and a fourth <u>Schottky barrier</u> diode having an anode connected to an the anode of the third diode.

15. (Currently Amended) A semiconductor device comprising a protection circuit for protecting a gate electrode of a <u>hetero-junction</u> field effect transistor against surge breakdown, wherein

the protection circuit includes a first <u>junction</u> diode unit made of a plurality of diodes in which a cathode or an anode is connected to the gate electrode, and a second <u>junction</u> diode unit made of a plurality of diodes in which an anode or a cathode is connected to the anode or the cathode of the first diode unit.